



US005931938A

United States Patent [19]

Drogichen et al.

[11] **Patent Number:** **5,931,938**[45] **Date of Patent:** **Aug. 3, 1999**

[54] **MULTIPROCESSOR COMPUTER HAVING
CONFIGURABLE HARDWARE SYSTEM
DOMAINS**

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[57] **ABSTRACT**

Global address and data routers interconnect individual system units each having its own processors, memory, and I/O. A domain filter coupled to the routers dynamically defines groups of system units as domains and clusters of domains which have both software and hardware isolation from each other. Clusters can share dynamically definable ranges of memory with each other. The domain filter has software-loadable registers on the system units and in the global routers to set the parameters of the domains and clusters. The registers label individual inter-system transactions on the routers as invalid for system units not in the same domain or cluster as the originating unit.

[21] **Appl. No.:** 08/763,934[22] **Filed:** Dec. 12, 1996[51] **Int. Cl.⁶** G06F 15/77; G06F 11/00[52] **U.S. Cl.** 712/15; 712/23[58] **Field of Search** 395/800.15, 800.23[56] **References Cited****U.S. PATENT DOCUMENTS**

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39 Claims, 13 Drawing Sheets